



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

CA-NV Fish Health Center  
24411 Coleman Hatchery Road  
Anderson, CA 96007



### MEMORANDUM

**DATE:** 5/11/07

**TO:** Klamath Fish Health Distribution List

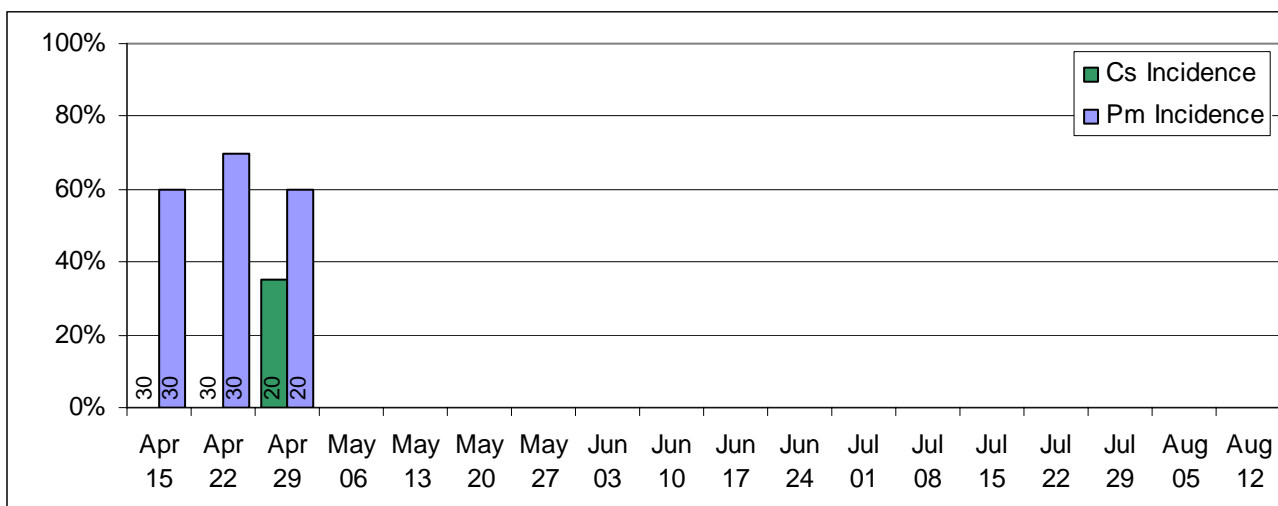
**FROM:** Ken Nichols  
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**SUBJECT:** 2007 Klamath River Pathogen Monitoring

As a component of Klamath River fish health assessment, the California-Nevada Fish Health Center is examining juvenile Klamath River Chinook salmon to monitor the incidence of *Ceratomyxa shasta* and *Parvicapsula minibicornis* infection. Fish are collected by biologists with the Karuk Tribe, Yurok Tribe, Hoopa Tribe and US Fish and Wildlife Service. The Fish Health Center is providing laboratory support for the project. Sampling began the week of April 15, 2007 and will continue into mid-August.

Pathogen testing by QPCR has been performed for fish collected in weeks 1-3 (April 15 – May 5). *C. shasta* has been detected in 7 of 70 Chinook tested (10%). *P. minibicornis* has been detected in 51 of 70 Chinook tested (73%). Minor clinical signs of disease were observed in >2% of the fish examined (gill lesions and hemorrhaged intestine). The next update of this data will be available after June 4.





**Figure 1. Incidence of *Ceratomyxa shasta* and *Parvicapsula minibicornis* infection in juvenile Klamath River Chinook salmon captured in the Shasta to Scott River reach. Number of fish assayed for each pathogen is indicated at the base of each bar.**

**Table 1. Incidence of *Ceratomyxa shasta* in Chinook salmon by Quantitative Polymerase Chain Reaction (QPCR). All data is preliminary and subject to revision.**

Reach	Apr 15	Apr 22	Apr 29	May 6	May 13	May 20	May 27	Jun 3	Jun 10	Jun 17	Jun 24	Jul 1	Jul 8	Jul 15	Jul 22	Jul 29	Aug 5	Aug 12
Shasta-Scott	0/30 0%	0/30 0%	7/20 35%															
Salmon-Trinity																		
Trinity-Estuary																		
Weekly Total	0/30 0%	0/30 0%	7/20 35%															

**Table 2. Incidence of *Parvicapsula minibicornis* in Chinook salmon by Quantitative Polymerase Chain Reaction (QPCR). All data is preliminary an subject to revision.**

Reach	Apr 15	Apr 22	Apr 29	May 6	May 13	May 20	May 27	Jun 3	Jun 10	Jun 17	Jun 24	Jul 1	Jul 8	Jul 15	Jul 22	Jul 29	Aug 5	Aug 12
Shasta-Scott	18/30 60%	21/30 70%	12/20 60%															
Salmon-Trinity																		
Trinity-Estuary																		
Weekly Total	18/30 60%	21/30 70%	12/20 60%															